Bellwork Alg 2 Friday, March 1, 2019

1. Find the exact solution. $\frac{2x}{9} + \frac{7}{6} = \frac{5}{3}$

Simplify each.

2. $$\frac{\frac{7}{3x^3y^2z} - \frac{3x}{5y^5z^3}}{\frac{4}{9xy^4} + \frac{5}{x^4yz^2}}$$

3. $$\frac{\frac{9x}{x+2} + \frac{6}{x}}{\frac{5}{x^2} - \frac{7}{x+2}}$$

ANSWERS

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1. Find the exact solution. $18\left(\frac{2x}{9}+\frac{7}{6}\right)=\left(\frac{5}{3}\right)18$

$4x+21=30$

$-21 \quad -21$

$\frac{4x}{4}=\frac{9}{4}$

$x = 9/4$

Simplify each.

2. $\dfrac{\left(\frac{7}{3x^3y^2z}-\frac{3x}{5y^5z^3}\right)}{\left(\frac{4}{9xy^4}+\frac{5}{x^4yz^2}\right)} \cdot \frac{45x^4y^5z^3}{45x^4y^5z^3}$

LCD: $= 45x^4y^5z^3$

$= \dfrac{105xy^3z^2 - 27x^5}{20x^3yz^3 + 225y^4z}$

3. $\dfrac{\left(\frac{9x}{x+2}+\frac{6}{x}\right)}{\left(\frac{5}{x^2}-\frac{7}{x+2}\right)} \cdot \frac{x^2(x+2)}{x^2(x+2)}$

LCD: $= x^2(x+2)$

$= \dfrac{9x\cdot x^2 + 6x(x+2)}{5(x+2) - 7x^2}$

$= \dfrac{9x^3+6x^2+12x}{5x+10-7x^2}$

$= \dfrac{9x^3+6x^2+12x}{-7x^2+5x+10}$